Amendments to Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for predicting an individual's bronchodilating response to an agonist of β_2AR, which comprises determining the individual's genotype for the +491PS, wherein a heterozygous C/T genotype or a homozygous T/T genotype indicates the individual is likely to exhibit a poor bronchodilating response to the agonist, wherein the agonist is selected from the group consisting of salmeterol, albuterol, metaproterenol, terbutaline and formoterol.

Claim 2 (canceled)

Claim 3 (original): The method of claim 1~~2~~, wherein the agonist is salmeterol.

Claim 4 (original): The method of claim 2~~3~~, wherein the individual suffers from asthma or COPD.

Claim 5 (currently amended): The method of claim 1, wherein determining the individual's~~patient's~~ genotype comprises isolating from the individual a nucleic acid mixture comprising the two copies of the β_2AR gene, or a fragment thereof, that are present in the individual and determining the identity of the nucleotide pair at ~~a position corresponding to~~ the +491PS in the two copies in order to assign a β_2AR genotype to the individual.

Claim 6 (withdrawn): A method for predicting a patient's bronchodilating response to an agonist of β_2AR, which comprises assaying a sample from the patient for expression of the Ile164 β_2AR variant, wherein presence of the Ile164 β_2AR variant indicates the patient is likely to exhibit a poor bronchodilating response to the agonist.

Claim 7 (withdrawn): The method of claim 6, wherein the agonist is selected from the group consisting of salmeterol, albuterol, metaproterenol, terbutaline and formoterol.

Claim 8 (withdrawn): The method of claim 7, wherein the agonist is salmeterol.

Claim 9 (withdrawn): The method of claim 8, wherein the individual is suffering from asthma or COPD.

Claim 10 (withdrawn): The method of claim 6, wherein the assaying step comprises contacting the sample with an antibody specific for the Ile164 β_2AR variant.

Claim 11 (withdrawn): A method for treating a patient suffering from asthma or COPD, which comprises

determining the patient's genotype for the +491PS and

making a treatment decision based on the genotype,

wherein if the patient has a heterozygous C/T genotype or a homozygous T/T genotype, the treatment decision is selected from the group consisting of:

(a) prescribing a higher dose of a β-agonist than typically indicated for individuals having similar weight and symptoms;

(b) prescribing more frequent doses of a β-agonist than typically indicated for individuals having similar weight and symptoms;

(c) prescribing both a higher dose and more frequent doses of a β-agonist than typically indicated for individuals having similar weight and symptoms;

(d) not prescribing a β-agonist; and

(e) prescribing a β-agonist in conjunction with another bronchodilating therapy.

Claim 12 (withdrawn): The method of claim 11, wherein the agonist is selected from the group consisting of salmeterol, albuterol, metaproterenol, terbutaline and formoterol.

Claim 13 (withdrawn): The method of claim 12, wherein the agonist is salmeterol.

Claim 14 (withdrawn): The method of claim 11, wherein determining the patient's genotype comprises isolating from the individual a nucleic acid mixture comprising the two copies of the β_2AR gene, or a fragment thereof, that are present in the individual and determining the identity of the nucleotide pair at a position corresponding to the +491PS in the two copies in order to assign a β_2AR genotype to the individual.